

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

Listing of the Claims:

1-16. (canceled)

17. (new) A roof panel for a greenhouse roof, the panel
comprising:

plural pairs of roof subpanels (12, 13), said roof
subpanels of each of said pairs meeting along a respective apex
(16) that runs at a first non-zero angle (θ) from horizontal when
installed in a greenhouse roof, said roof subpanels sloping away
from said apex at a second non-zero angle (γ) that remains
constant along a length of said apex, said apexes being parallel
to each other, each of said pairs of roof subpanels meeting an
adjacent one of said pairs along a respective nadir (18) that
runs at the first non-zero angle from horizontal, said nadirs
being parallel to said apexes,

each of said roof subpanels comprising a roof sheet (71) and a base sheet (73) that are separated from each other by
a first non-zero distance (h_4), said roof sheet and said base
sheet being parallel to each other and connected to each other
with partitions (75, 76).

18. (new) The roof panel of claim 17, wherein said partitions extend vertically and connect said roof sheet to said base sheet only at said apex and said nadir.

19. (new) The roof panel of claim 17, wherein said nadirs are separated from each other by a distance that is from 1 cm to 10 cm.

20. (new) The roof panel of claim 17, wherein said nadirs are separated from each other by a distance that is from 1.5 cm to 3 cm.

21. (new) The roof panel of claim 17, wherein the first non-zero distance is from 1 cm to 10 cm.

22. (new) The roof panel of claim 17, wherein the first non-zero distance is from 1.5 cm to 3 cm.

23. (new) The roof panel of claim 17, wherein said nadirs are separated from each other by a distance that is from 1.5 cm to 3 cm, and wherein the first non-zero distance is from 1.5 cm to 3 cm.

24. (new) The roof panel of claim 17, wherein said roof panel comprises transparent plastic 0.5 mm to 5 mm thick.

25. (new) The roof panel of claim 17, wherein said roof panel comprises transparent plastic 0.5 mm to 2 mm thick.

26. (new) A greenhouse roof with a longitudinal direction (L) and a transverse direction (D) perpendicular thereto, the roof comprising:

plural pairs of transparent roof surfaces (5,6,7,8) in succession in the transverse direction, the roof surfaces of each pair of the plural pairs of roof surfaces meeting adjacent to a respective first apex (9,10), each of the roof surfaces extending from adjacent to a respective base edge (11) at a first non-zero angle (θ) from a horizontal extending in the transverse direction, each said first apex and each said base edge extending in the longitudinal direction; and

each of the roof surfaces comprising plural pairs of roof subpanels (12, 13) in succession in the longitudinal direction, the roof subpanels of each pair of the plural pairs of roof subpanels meeting along a respective second apex (16) that runs at the first angle from horizontal and extends from adjacent to a respective said base edge to a respective said first apex, each of the roof subpanels lying at a second non-zero angle (γ) relative to a horizontal extending in the longitudinal direction, wherein said roof subpanels of one said roof surface meet said roof subpanels of an adjoining said roof surface adjacent to said first apex along two edges that slope away from said first apex at the second angle (γ) relative to horizontal.

27. (new) The roof of claim 26, wherein said roof surfaces are double-walled.

28. (new) The roof of claim 26, further comprising a base sheet that is attached to said roof surfaces with links.

29. (new) The roof of claim 28, wherein said base sheet is flat and said links are attached to each said peak.

30. (new) The roof of claim 28, wherein said base sheet is flat and said links are attached to said base sides.

31. (new) The roof of claim 28, wherein said base sheet has plural base surfaces that are each generally parallel to an adjacent one of said roof surfaces.

32. (new) The roof of claim 28, wherein a distance (h_4) between said base sheet and said second apex is from 1 cm to 10 cm.

33. (new) The roof of claim 28, wherein a distance (h_4) between said base sheet and said second apex is from 1.5 cm to 3 cm.

34. (new) The roof of claim 26, wherein a distance (d_2) between edges of said pairs of roof subpanels is from 1 cm to 10 cm.

35. (new) The roof of claim 34, wherein the distance (d_2) between edges of said pairs of roof subpanels is from 1.5 cm to 3 cm.

36. (new) The roof of claim 28, wherein a distance (h_4) between said base sheet and said second apex is from 1.5 cm to 3 cm, and wherein the distance (d_2) between edges of said pairs of roof subpanels is from 1.5 cm to 3 cm.

37. (new) The roof of claim 26, wherein the first angle is from 30° to 75° .

38. (new) The roof of claim 37, wherein the first angle is from 45° to 75° .

39. (new) The roof of claim 26, wherein said roof subpanels comprise transparent plastic 0.5 mm to 5 mm thick.

40. (new) The roof of claim 39, wherein said transparent plastic is 0.5 mm to 2 mm thick.

41. (new) The roof of claim 26, wherein a distance (d_2) between edges of said pairs of roof subpanels is between 0.5 and 0.001 times a distance (d_1) between the base edges of the transparent roof surfaces.

42. (new) The roof of claim 26, wherein a height (h_2) of the second apex relative to the base edge (11) is between 0.5 and 0.001 times a height (h_1) of the first apex relative to the base edge (11).

43. (new) A greenhouse roof with a longitudinal direction and a transverse direction perpendicular thereto, the roof comprising:

plural transparent pyramids arranged in succession in the transverse and longitudinal directions, each of the pyramids having two longitudinal base sides in the longitudinal direction and two transverse base sides in the transverse direction and four roof surfaces that meet at a respective peak (38),

each of the roof surfaces that extends from one of the transverse base sides to the peak having an edge running at a first non-zero angle (γ) relative to a horizontal extending in the longitudinal direction, and each of the roof surfaces that extends from one of the longitudinal base sides to the peak having an edge running at a second non-zero angle (θ) relative to a horizontal extending in the transverse direction.

44. (new) The roof of claim 43, wherein said roof surfaces are double-walled.

45. (new) The roof of claim 43, further comprising a base sheet that is attached to said roof surfaces with links.

46. (new) The roof of claim 45, wherein said base sheet is flat and said links are attached to said base sides.

47. (new) The roof of claim 43, wherein said roof surfaces comprise transparent plastic 0.5 mm to 5 mm thick.

48. (new) The roof of claim 47, wherein said transparent plastic is 0.5 mm to 2 mm thick.

49. (new) A greenhouse comprising:

plural uprights connected by girders and supporting a roof with a longitudinal direction (L) and a transverse direction (D) perpendicular thereto,

the roof having plural pairs of transparent roof surfaces (5,6,7,8) in succession in the transverse direction, the roof surfaces of each pair of the plural pairs of roof surfaces

meeting adjacent to a respective first apex (9,10), each of the roof surfaces extending from adjacent to a respective base edge (11) at a first non-zero angle (θ) from horizontal, each said first apex and each said base edge extending in the longitudinal direction; and

each of the roof surfaces comprising plural pairs of roof panels (14, 15) in succession in the longitudinal direction, the roof panels of each pair of the plural pairs of roof panels meeting along a respective second apex (17) that runs at the first angle from horizontal and extends from adjacent to a respective said base edge to a respective peak, each of the roof panels lying at a second non-zero angle (γ) relative to horizontal, wherein said roof panels of one said roof surface meet said roof panels of an adjoining said roof surface adjacent to said first apex along two edges that slope away from the peak at the second angle (γ) relative to horizontal.

50. (new) A greenhouse comprising:

plural uprights connected by girders and supporting a roof with a longitudinal direction (L) and a transverse direction (D) perpendicular thereto,

the roof comprising plural transparent pyramids arranged in succession in the transverse and longitudinal directions, each of the pyramids having two longitudinal base sides in the longitudinal direction and two transverse base sides

in the transverse direction and four roof surfaces that meet at a respective peak (38),

each of the roof surfaces that extends from one of the transverse base sides to the peak having an edge running at a first non-zero angle (γ) relative to horizontal, and each of the roof surfaces that extends from one of the longitudinal base sides to the peak having an edge running at a second non-zero angle (θ) relative to horizontal.